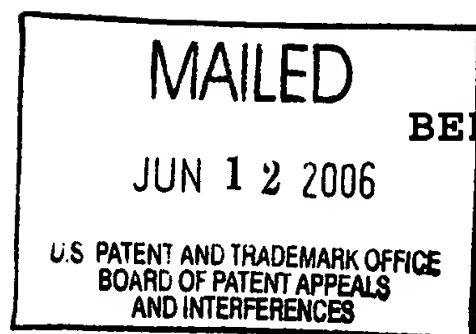


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE



**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte KAZUYUKI NAKATA

Appeal No. 2005-2432
Application No. 09/890,028

ON BRIEF

Before CAROFF, PAK, and WALTZ, Administrative Patent
Judges.

CAROFF, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-12, all of the pending claims in appellant's involved application.

In a paper filed on April 7, 2006, appellant waived the right to appear at oral hearing.

The appealed claims relate to a stable, uniform, and alkali metal free aqueous dispersion of an ethylene-

methacrylic acid copolymer in water which also includes ammonia in an amount required for neutralizing 110-150% of the carboxyl groups of the copolymer. The claims are directed to the dispersion itself (claims 1-8), as well as a coated substrate (claims 9-10),¹ and a process of making the dispersion (claims 11-12).

Although appellant identifies each claim as being a member of one of four distinct groups of claims on page 8 of the brief, we note that appellant has not argued the separate patentability of any individual claim or any individual group of claims, statements in the examiner's answer to the contrary notwithstanding. Accordingly, we shall consider all of the claims as standing or falling together for purposes of this appeal. Cf. In re McDaniel, 293 F.3d 1379, 1383, 63 USPQ 2d 1462, 1465 (Fed. Cir. 2002). Therefore, we limit our consideration to the independent claim directed to the dispersion itself (claim 1). Claim 1 reads as follows:

Claim 1. A stable, uniform, and alkali metal free aqueous dispersion consisting essentially of a dispersion in water of component (A), an ethylene-methacrylic acid copolymer containing 15-35 wt% methacrylic acid based on total weight

¹ We note that claim 10 appears to be an informal dependent claim which omits any reference to the claim from which it depends. For purposes of this appeal, we shall presume that claim 10 was meant to depend from claim 9 as did original claim 10.

of copolymer, and component (B), ammonia in an amount required for neutralizing 110-150% of the carboxyl groups of component (A).

The prior art references relied upon by the examiner are:

Best	GB 2269822	Feb. 23, 1994
Nothnagel	5,319,019	June 7, 1994

Additionally, the following reference has been cited in appellant's reply brief: Bailey's Industrial Oil and Fat Products, Vol. 1, 4th ed. (John Wiley and Sons), p. 596, (1979).

All of the appealed claims stand rejected under 35 U.S.C. § 103(a) for obviousness in view of Best taken in combination with Nothnagel.

We have carefully considered the issues in this case in light of the evidentiary record and the opposing positions taken by the appellant and the examiner on appeal. Having done so, we conclude that the examiner has established a prima facie case of obviousness which is not outweighed by the evidence of nonobviousness relied upon by the appellant. Accordingly, we shall affirm the rejection at issue.

As the examiner indicates, Best discloses an aqueous dispersion of an ethylene-unsaturated carboxylic acid

copolymer. Best teaches that the copolymer may be a copolymer of ethylene and methacrylic acid (page 1, para. 3; claim 2) where the methacrylic acid content is in the range of 5 to 25% (page 2, para 3). Moreover, Best teaches that efficient dispersion of such copolymers can be achieved by "partial or complete neutralisation of the acidic groups" of the copolymer with, inter alia, ammonia (page 2, para. 3).

Nothnagel also relates to aqueous dispersions of ammonia salts of acrylic-type polymers or copolymers (col. 7, lines 45-68).

Nothnagel (column 10, line 62 - column 11, line 3) teaches:

" . . . the acrylic polymer in the dispersion is substantially completely neutralized with ammonia and preferably should have excess ammonia added effectively giving about 25% to about 50% more amine or ammonia than required for 100% neutralization of the polymer. This prevents a deficiency of ammonia and a pH drop in the dispersion caused by the ammonia loss during distillation and storage. Without excess ammonia, the pH of the dispersion could drop below 7 and destabilize the dispersion." [Underlining added for emphasis]

We agree with the examiner that it would have been prima facie obvious, within the context of 35 U.S.C. § 103, to use an excess of ammonia in Best to prevent a drop in pH, and thereby maintain the stability of the aqueous copolymer dispersion, as suggested by Nothnagel.

In this regard, it appears that Best and Nothnagel employ ammonia for essentially the same purpose, i.e. to neutralize the acidic carboxyl groups of an acrylic-type polymer or copolymer, and thereby maintain the stability of an aqueous dispersion of the polymer.

We are mindful that, as appellant points out, the process used by Nothnagel to produce an aqueous dispersion of the polymer is quite different from the process used by Best; the Nothnagel process involving distillation and removal of an organic solvent, whereas the Best process uses mechanical shearing forces to produce a fine particle dispersion in a "disintegrator". Nevertheless, we find the teachings of Nothnagel as being applicable to Best in the sense that Nothnagel suggests that an excess of ammonia is beneficial not only for distillation purposes but, also, to maintain the pH and the stability of the aqueous dispersion during "storage", i.e. to increase shelf-life. Since, ultimately, the Best and Nothnagel processes both result in the production of an essentially aqueous polymer dispersion, a person of ordinary skill in the art would understand that the enhanced storage or shelf life benefit of using excess ammonia (as taught by Nothnagel) would be desirable with regard to the Best product as well as that of Nothnagel.

Appellant relies upon the comparative data on pages 6-8 of the instant specification as evidence of nonobviousness. We find that evidence to be insufficient to overcome the prima facie case of obviousness for the following reasons:

First of all, as suggested by the examiner, the demonstrated results are indicative of expected results in that, in view of the teachings of Nothnagel, a degree of neutralization at or below 100% would be expected to contribute to destabilization problems. Expected results are evidence of obviousness rather than nonobviousness. In re Skoner, 517 F.2d 947, 950, 186 USPQ 80, 82 (CCPA 1975).

Second, we agree with the examiner that the evidence relied upon by the appellant is not commensurate with the claims which are of broader scope. In this regard, we note that all of the copolymers evaluated by appellant had a methacrylic acid content of 20 wt%, whereas claim 1 encompasses copolymers which have a methacrylic acid content as high as 35 wt%.

In a similar vein, each of Application Examples 1-3 involve a degree of neutralization of 130% (ammonia); whereas claim 1 encompasses a degree of neutralization as low as 110%.

Thus, we conclude that the evidence of nonobviousness is insufficient to outweigh the evidence of obviousness.

One final note. We agree with the appellant that the examiner's statements regarding HLB (hydrophile/lipophile balance) are not pertinent to the issues in this appeal, as aptly explained in appellant's reply brief. Be that as it may, the examiner's reliance on HLB considerations does not constitute reversible error inasmuch as the examiner's rejection is sustainable on other grounds, as discussed above, without regard to HLB.

For the foregoing reasons, the decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

Marc L. Caroff
MARC L. CAROFF

MARC L. CAROFF
Administrative Patent Judge

CHUNG K. PAK
Administrative Patent J

CHUNG K/PAK
Administrative Patent Judge

THOMAS A. WALTZ
Administrative Patent Judge

THOMAS A. WALTZ
Administrative Patent Judge

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